

# **Operation and Maintenance Plans**

# 195.402

## "1969"

- (a) Each Carrier Shall Establish and Maintain Current Written Procedures:
  - (1) To ensure the safe operation and maintenance of its pipeline system in accordance with this Part during normal operations.
  - (2) To be followed during abnormal operations and emergencies.

# **195.402**

## **Amdt.195-15; 1979**

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- (a) General Requirements
- (b) Amending Procedures
- (c) Maintenance and Normal Operations
- (d) Abnormal Operations
- (e) Emergencies
- (f) Safety Related Condition Reports\*\*

195-39; 1988

# General Requirements

## 195.402 (a)

- Prepare & Follow Written Procedures
- Each Pipeline System
- 15 Month Review (or Calendar Year)
- Revised as Necessary
- Before Initial Operation of a Pipeline
- Appropriate Parts Kept At Applicable Locations

# Procedure Requirement Questions

- Is It In Writing?
- Is It Adequate?
- Are Employees Following It?
- Does IT Apply To EACH P/L System?
- Did IT Exist BEFORE Startup?
- Is IT Available to Employees?
- Is IT Reviewed (<15 MO./Yr..)?

# Notice of Amendment

## 195.402 (b)

- OPS or Certified State Agency
- Opportunity for Hearing  
(190.237)/Relevant State Procedures
- May Require Operators to Amend Procedures
- To Provide Reasonable Level of Safety

# Amendment of Plans & Procedures 190.237

- Issue Notice
  - Provide for Opportunity for Hearing
  - Proposed Action

# **Amendment of Plans & Procedures 190.237**

## **■ Must Consider**

- Relevant Available P/L Safety Data
- Appropriateness of Plans/Procedures for P/L/Facility/Location
- Reasonableness
- Extent to which Plans/Procedures Contribute to Public Safety



## **Maintenance and Normal Operations**

### **195.402 (c)**

- (1) Construction Records, Maps and Operating History Available for Safe Operation
- (2) Gathering Accident Data for Reports
- (3) Operating, Maintaining and Repairing Pipeline in Accordance with Subpart
- (4) Determining Pipelines in Areas Requiring Immediate Response in the Event of Failure or Malfunction

# **Maintenance and Normal Operations**

## **195.402 (c) (cont'd)**

- (5) Analyzing Pipeline Accidents
- (6) Minimizing Potential for Hazard (In Areas Requiring Immediate Response)
- (7) Starting Up and Shutting down P/L to Keep Within "Safe Limits"
- (8) Monitoring Pressure During Start-up and Delivery and During Shut-ins
- (9) Monitoring Pipeline Data From Facilities in Areas Requiring Immediate Response or Receipt and Delivery Points, If Not Equipped to Fail Safe

# **Maintenance and Normal Operations**

## **195.402 (c) (cont'd)**

- (10) Abandoning Pipeline Facilitates
- (11) Minimizing the Likelihood of Ignition
- (12) Establishing and Maintaining Liaison with Fire and Public Officials
- (13) Review of Personnel to Determine Effectiveness of Procedures
- (14) Trench Safety

195.402(C)(1)

# Construction Records & Maps

195.266 & 195.310

- Construction Records
  - Welding Records, Pipe Specs, Depth of Cover, Pressure Test Records
- Maps
  - Location of P/L Crossings, Utility Crossings, Overhead Crossings, Valve & CP Test Stations
- Operating History
  - Pressure Test Records / Historical Pressures

# Gathering Accident Data for Reports

## ■ (2)

- Who is Responsible For Making Telephone Call / Written Report
- Criteria For Completing Each Report
- The Time Limit On Reporting
- Data To Be Reported (195.50 , .52 & .54)
- Telephone Number
- Address For Written Reports

# Operating, Maintaining & Repairing Pipeline

- Training
- Maps & Records
- Floating Roofs
- MOPs
- Communications
- Line Markers
- ROW Inspections
- Valve Maintenance
- Corrosion Control Records
- Pipeline Repairs
- Pipe Movement
- Scraper & Sphere Facilities
- Overpressure Safety Devices
- Fire Fighting Equipment
- Breakout Tanks
- Signs
- Security of Facilities
- Smoking or Open Flames
- Public Education
- Damage Prevention
- CPM Leak Detection

195.402 (c) (4)

# Areas Requiring Immediate Response

- What are Areas Requiring Immediate Response ?
  - Check HCA's / Pipeline Facility Response Plan (49 CFR Part 194)
- Where are They?
  - Proximity to: Residential, Commercial, Industrial
  - HVLs must consider Topography
- Does an Operator have to Claim some?

195.402 (c) (5)

# Analyzing P/L Accidents

- Consideration Should Be Given To:
  - Data Examination
  - Responsible Personnel
  - Metallurgical Examination
  - Material Analysis



# Monitoring Operational Information

- (6) Minimizing the Potential for Hazards & Reoccurrence of Accidents
- (7) Start Up / Shut Down of P/L  
To Keep Within "Safe Limits"
- (8) Monitoring Pressure

## During Start up /Delivery /Shut-Ins

Fail Safe means to incorporate in a pipeline system or facilities, a system that automatically counteracts the effect of operational or mechanical failure by some method :

- Shut-down or Other Action To Prevent Exceeding the Operational Limits
- (9) Monitoring P/L Data From Facilities in:
  - Areas Requiring Immediate Response
  - Receipt and Delivery Points
  - If Not Equipped to Fail Safe

195.402 (c)

# Other Requirements

- (10) Abandoning Pipeline Facilitates
  - Offshore & Navigable Waterways Report to NPMS
- (11) Minimizing Likelihood of Accidental Ignition of Vapors
  - *Portable Flares for HVLs, Protection from Electrical Sparking (i.e. Vehicles, Switches, Welding)*
- (12) Establishing & Maintaining Liaison w/ Emergency Response Officials
  - *Define Role ; ICS ; Means of Communication*
- (13) Periodic Review
- (14) Trench Safety

# **Abnormal Operations**

## **195. 402 (d)**

# Abnormal Operation Manual

- Purpose:
  - Provide Safety When Operating Design Limits Have Been Exceeded

# Operating Design Limits

- “...those limits or ranges of pressure, flow, or temperature etc., that a carrier imposes on it's pipeline system to define normal operations”
- “Operations outside these limits indicate an abnormal condition which should be corrected to avoid approaching the strength limit of the system and the potential for failure”

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# Causes of Abnormal Operations

## 195.402 (d) (1)

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- Unintended Closure of Valves / Pump Shutdowns
- Pressure or Flow - Increase/Decrease
- Loss of Communication
- Operation of Any Safety Device
- Other Malfunction / Hazards to Persons or Property
  - Component
  - Deviation from Normal Operation
  - Personnel Error

# **Abnormal Procedures Must Include:**

- (1) Responding/Investigating/Correcting
- (2) Determining Integrity of System
- (3) Correcting Variations
- (4) Notifying Operating Personnel
- (5) Periodically Reviewing Response

195.402 (e)

# **Emergency Procedures Must Include**

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- Receiving notices of Events
- Response
- Resources
- Actions
- Control of Hazardous Liquid
- Minimizing Public Exposure